

OCHORISTICA SCELOPORI (CESTODA: LINSTOWIIDAE) IN
A GRASSLAND POPULATION OF THE BUNCH GRASS LIZARD,
SCELOPORUS SCALARIS (PHRYNOSOMATIDAE), FROM ARIZONA

Stephen R. Goldberg¹, Charles R. Bursey², Chris T. McAllister³,
Hobart M. Smith⁴, and Quynh A. Truong¹

Key words: *Sceloporus scalaris*, *bunch grass lizard*, *Phrynosomatidae*, *Oochoristica scelopori*, *Cestoda*, *Arizona*.

The bunch grass lizard (*Sceloporus scalaris* Wiegmann, 1828) is known from the Huachuca, Dragoon, Santa Rita, and Chiricahua mountains of Arizona, the Animas Mountains of New Mexico, and in the Sierra Madre Occidental and Sierra del Nido of Mexico, usually above 1830 m, but a few isolated valley populations occur as low as 1200 m (Stebbins 1985). To our knowledge, the only report of helminths of this species was a study of a high-elevation (2438–2560 m) Chiricahua Mountain population of *Sceloporus scalaris slevini* by Goldberg and Bursey (1992a). The purpose of our note is to report on a helminthological examination of a low-elevation (ca 1524 m) grassland population of *S. scalaris slevini* Smith, 1937 from Arizona, and to compare our findings with those of Goldberg and Bursey (1992a).

We examined 51 *S. scalaris slevini* (mean snout-vent length 51 ± 3.4 mm [s], range 40–55 mm) collected (mostly by hand, a few by dust shot) on the Sonoita Plain, elevation ca 1524 m (31°39'N, 111°32'W), in the vicinity of Elgin, Santa Cruz County, Arizona. Specimens were deposited in the University of Colorado, Museum of Natural History, Boulder, Colorado as UCM 57259-57282; 57284-57286; 57289-57292; 57295-57298; 57300-57305; 57307-57310; 57313-57316; 57318-57319. UCM 57318-57319 were collected 20 August 1989; others were collected 12–19 July 1990.

The abdomen was opened, and the esophagus, stomach, and small and large intestines were removed from the carcass. Each organ was slit longitudinally and examined under a dissecting microscope. The liver and body cavity were also examined. Each helminth was

identified using a glycerol wet mount. Representative cestodes were stained with hematoxylin and mounted in balsam for further examination. Voucher specimens were deposited in the U.S. National Parasite Collection, Beltsville, Maryland 20705 (USNPC 85053). Terminology use is in accordance with Margolis et al. (1982).

Only 1 helminth was found, the cestode *Oochoristica scelopori* Voge and Fox 1950. Prevalence of infection was 10% (5 of 51); mean intensity = 1.2 ± 0.45 [s], range 1–2.

In the only other investigation of helminths of *S. scalaris*, Goldberg and Bursey (1992a) reported finding tetrathyridia of the cestode *Mesocestoides* sp. (prevalence 8%) and larvae of the nematode *Physaloptera* sp. (prevalence 3%). That study was done on a coniferous forest high-elevation population (approximately 2500 m) in the Chiricahua Mountains, whereas the current study considered a low-elevation population (ca 1524 m) on the Sonoita Plain, located ca 126 km SE of the Chiricahua Mountains study site. Although both populations harbored mutually exclusive helminth faunas, additional work on larger *S. scalaris* samples from these sites will be required to determine the constancy of these differences.

Oochoristica scelopori is a common cestode of North American lizards and has been found in 14 other North American phrynosomatid lizards (Table 1). In addition, Anrein (1951) and Telford (1964) reported finding *O. scelopori* in the xantusiids, *Xantusia henshawi*, *X. riversiana*, and *X. vigilis*. Measurements of various structures of these cestodes were strikingly different from the measurements as given

¹Department of Biology, Whittier College, Whittier, CA 90608. Address correspondence to this author.

²Department of Biology, Pennsylvania State University, Shenango Valley Campus, Sharon, PA 16146.

³Department of Biology, Texas Wesleyan University, 1201 Wesleyan, Fort Worth, TX 76105-1536.

⁴EPO Biology, University of Colorado, Boulder, CO 80309-0334.

TABLE 1. Definitive hosts of *Oochoristica scelopori* in North America.

Host	Locality	Prevalence	Reference
<i>Crotaphytus collaris</i>	California	100% (1/1)	Telford 1970
<i>Gambelia wislizenii</i>	California	40% (2/5)	Telford 1970
<i>Sceloporus clarkii</i>	Arizona	5% (1/20)	Goldberg et al. 1994
<i>S. graciosus</i>	California	not given	Voge and Fox 1950
	California	10% (7/71)	Telford 1970
	Idaho	22% (2/9)	Waitz 1961
	Idaho	1% (1/118)	Lyon 1986
	Utah	5% (1/22)	Pearce and Tanner 1973
<i>S. jarrovi</i>	Arizona	10% (47/489)	Goldberg and Bursey 1990
	Arizona	3% (1/31)	Goldberg and Bursey 1992b
	Arizona	5% (15/302)	Goldberg et al. 1995a
<i>S. magister</i>	Arizona	(?/3)	Walker and Mathias 1973
	Texas	6% (1/17)	Goldberg et al. 1995b
<i>S. occidentalis</i>	California	20% (13/65)	Voge and Fox 1950
	California	23% (27/116)	Telford 1970
	Idaho	11% (2/19)	Lyon 1986
	Oregon	33% (20/60)	White and Knapp 1979
	Utah	9% (1/11)	Pearce and Tanner 1973
<i>S. olivaceus</i>	Texas	3% (2/61)	Goldberg et al. 1995b
<i>S. orcutti</i>	California	22% (16/74)	Goldberg and Bursey 1991
<i>S. poinsettii</i>	Texas	30% (3/10)	Goldberg et al. 1993
<i>S. scalaris</i>	Arizona	10% (5/51)	this paper
<i>S. undulatus</i>	Arizona	6% (3/48)	Goldberg et al. 1994
<i>Uma inornata</i>	California	7% (1/15)	Telford 1970
<i>U. notata</i>	California	42% (10/24)	Telford 1970
<i>Urosaurus graciosus</i>	California	6% (2/34)	Telford 1970

in the original description of *O. scelopori* by Voge and Fox (1950). Amrein (1951) reported the average length of 25 mature cestodes from *X. henshawi* and *X. vigilis* to be 15.82 mm; the cestodes from *X. riversiana* measured 33–37 mm. Telford (1964) indicated his cestode specimens from xantusiid lizards were less than 45 mm. Both Amrein and Telford identified these cestodes as *O. scelopori*. Bursey and Goldberg (1992) found Amrein's measurements of cestodes from *X. henshawi* and *X. vigilis* to approximate the measurements of *O. bezyi*, whereas Telford's measurements of cestodes from *X. riversiana* approximated measurements of *O. islandensis* and suggested that *X. henshawi*, *X. riversiana*, and *X. vigilis* be removed from the host list of *O. scelopori*, leaving only phrynosomatid lizards as hosts for *O. scelopori*.

LITERATURE CITED

- AMREIN, Y. U. 1951. The intestinal entozoa of the night lizards of California and their mode of transmission. Unpublished doctoral dissertation, University of California, Los Angeles. 162 pp.
- BURSEY, C. R., AND S. R. GOLDBERG. 1992. *Oochoristica islandensis* n. sp. (Cestoda: Linstowiidae) from the island night lizard, *Xantusia riversiana* (Sauria: Xantusiidae). Transactions of the American Microscopical Society 111: 302–313.
- GOLDBERG, S. R., AND C. R. BURSEY. 1990. Gastrointestinal helminths of the Yarrow spiny lizard, *Sceloporus jarrovi* Cope. American Midland Naturalist 124: 360–365.
- _____. 1991. Intestinal helminths of the granite spiny lizard (*Sceloporus orcutti*). Journal of Wildlife Diseases 27: 355–357.
- _____. 1992a. Helminths of the bunch grass lizard, *Sceloporus scalaris slevini* (Iguanidae). Journal of the Helminthological Society of Washington 59: 130–131.
- _____. 1992b. Prevalence of the nematode *Spauligodon giganticus* (Oxyurida: Pharyngodonidae) in neonatal Yarrow's spiny lizards, *Sceloporus jarrovi* (Sauria: Iguanidae). Journal of Parasitology 78: 539–541.
- GOLDBERG, S. R., C. R. BURSEY, AND R. L. BEZY. 1995a. Helminths of isolated montane populations of Yarrow's spiny lizard, *Sceloporus jarrovi* (Phrynosomatidae). Southwestern Naturalist 40: 330–333.
- GOLDBERG, S. R., C. R. BURSEY, AND C. T. McALLISTER. 1995b. Gastrointestinal helminths of nine species of *Sceloporus* lizards (Phrynosomatidae) from Texas. Journal of the Helminthological Society of Washington 62: 188–196.
- GOLDBERG, S. R., C. R. BURSEY, AND R. TAWIL. 1993. Gastrointestinal helminths of the crevice spiny lizard, *Sceloporus poinsettii* (Phrynosomatidae). Journal of the Helminthological Society of Washington 60: 263–265.
- _____. 1994. Gastrointestinal helminths of *Sceloporus* lizards from Arizona. Journal of the Helminthological Society of Washington 61: 73–83.
- LYON, R. E. 1986. Helminth parasites of six lizard species from southern Idaho. Proceedings of the Helminthological Society of Washington 53: 291–293.

- MARGOLIS, L., G. W. ESCIL, J. C. HOLMES, A. M. KURIS, AND G. A. SCHAD. 1982. The use of ecological terms in parasitology (report of an ad hoc committee of the American Society of Parasitologists). *Journal of Parasitology* 68: 131-133.
- PEARCE, R. C., AND W. W. TANNER. 1973. Helminths of *Sceloporus* lizards in the Great Basin and Upper Colorado Plateau of Utah. *Great Basin Naturalist* 33: 1-18.
- STEBBINS, R. C. 1985. A field guide to western reptiles and amphibians. Houghton Mifflin Company, Boston. 336 pp.
- TELFORD, S. R. 1964. A comparative study of endoparasitism among some southern California lizard populations. Unpublished doctoral dissertation, University of California, Los Angeles. 260 pp.
- _____. 1970. A comparative study of endoparasitism among some southern California lizard populations. *American Midland Naturalist* 83: 516-554.
- VOGE, M., AND W. FOX. 1950. A new anoplocephalid cestode, *Oochoristica scelopori* n. sp., from the Pacific fence lizard, *Sceloporus occidentalis occidentalis*. *Transactions of the American Microscopical Society* 69: 236-242.
- WAITZ, J. A. 1961. Parasites of Idaho reptiles. *Journal of Parasitology* 47: 51.
- WALKER, K. A., AND D. V. MATTHIAS. 1973. Helminths of some northern Arizona lizards. *Proceedings of the Helminthological Society of Washington* 40: 168-169.
- WHITE II, R. L., AND S. E. KNAPP. 1979. Helminth parasites of sceloporine (Iguanidae) lizards from central Oregon. *Proceedings of the Helminthological Society of Washington* 46: 270-272.

Received 25 July 1995

Accepted 31 October 1995